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**52.** The rotating device of claim **51** further comprising a feedback mechanism coupled to said capacitance sensor and said biasing element.

**53.** The rotating device of claim **50** further comprising a voltage source coupled between said second comb fingers and said first comb fingers. 5

**54.** The rotating device of claim **53** further comprising a position sensor to sense the position of the rotating element.

**55.** The rotating device of claim **54**, further comprising a feedback mechanism coupled between the position sensor and voltage source. 10

**56.** The rotating device of claim **54**, wherein the position sensor includes one or more of the following:

one or more gap closing electrodes,

a second plurality of first comb fingers coupled to the rotating element and a second plurality of second comb fingers that interdigitate with the first comb fingers in the second plurality, 15

a capacitance sensor coupled between the first plurality of first comb fingers and the first plurality of second comb fingers 20

a piezoresistive strain gauge,

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a piezoelectric sensor, or

an optical sensor.

**57.** The rotating device of claim **50** wherein said biasing element produces a time-varying biasing force.

**58.** The rotating device of claim **50** wherein said biasing element produces a constant biasing force.

**59.** The rotating device of claim **31**, further comprising:

e) a frame having a third structure coupled to the rotatable flexure;

f) a plurality of third comb fingers extending from the third structure

g) a second rotatable flexure coupled to the frame such that the frame can rotate about a second axis;

h) a plurality of fourth comb fingers coupled to a fourth structure, wherein said third comb fingers are self-aligned and interdigitated with said fourth comb fingers in an engagement.

**60.** The device of claim **59**, wherein the device is employed in an optical switch.

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